

Features

- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant(Note 2) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Planar Structure Die and Soft Recovery Characteristics

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C
- Typical Thermal Resistance: 0.7°C/W Junction to Case

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MURSB3060C	MURSB3060C	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Rectified Forward Current	$I_{F(AV)}$	30A	$T_C = 130^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	300A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage	V_F	1.6V(Typ) 2.0V(Max) 1.35V(Typ)	$I_F=30A; T_J=25^\circ\text{C}$ $I_F=30A; T_J=25^\circ\text{C}$ $I_F=30A; T_J=150^\circ\text{C}$
Maximum Reverse Current At Rated DC Blocking Voltage	I_R	5µA 1mA	$T_J=25^\circ\text{C};$ $T_J=150^\circ\text{C}$
Typical Junction Capacitance	C_J	180pF	Measured at 1.0MHz, $V_R=4.0V$

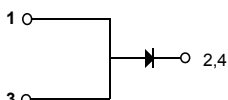
Dynamic Recovery Characteristics @ 25°C Unless Otherwise Specified

Reverse Recovery Time	t_{rr}	35ns(Typ.) 45ns(Max.)	$I_F=0.5A; I_R=1.0A;$ $I_{RR}=0.25A$	$I_F = 30A$ $di_F/dt = -200 A/\mu s$ $V_R = 400 V$
		75ns(Typ.) 135ns(Typ.)	$T_J=25^\circ\text{C}$ $T_J=150^\circ\text{C}$	
Peak recovery current	I_{RRM}	4.5A(Typ.) 14.3A(Typ.)	$T_J=25^\circ\text{C}$ $T_J=150^\circ\text{C}$	
Reverse recovery charge	Q_{rr}	170nC(Typ.) 980nC(Typ.)	$T_J=25^\circ\text{C}$ $T_J=150^\circ\text{C}$	

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

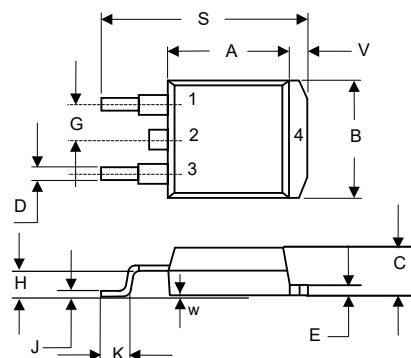
2. High temperature solder exemption applied, see EU directive annex 7a.

Internal Structure



**30 Amp
FRED Rectifiers
600 Volts**

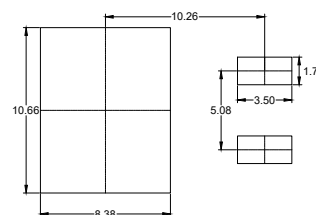
D²-PAK



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.331	0.370	8.40	9.40	
B	0.378	0.417	9.60	10.60	
C	0.165	0.189	4.20	4.80	
D	0.027	0.037	0.68	0.94	
E	0.045	0.055	1.14	1.40	
G	0.10		2.54		TYP.
H	0.096	0.134	2.43	3.40	
J	0.011	0.025	0.28	0.64	
K	0.071	0.131	1.80	3.32	
S	0.575	0.625	14.60	15.87	
V	0.042	0.058	1.07	1.47	
W	0.000	0.010	0.00	0.25	

Suggested Solder Pad Layout

Unit:mm



Curve Characteristics

Fig. 1 - Forward Current Derating Curve

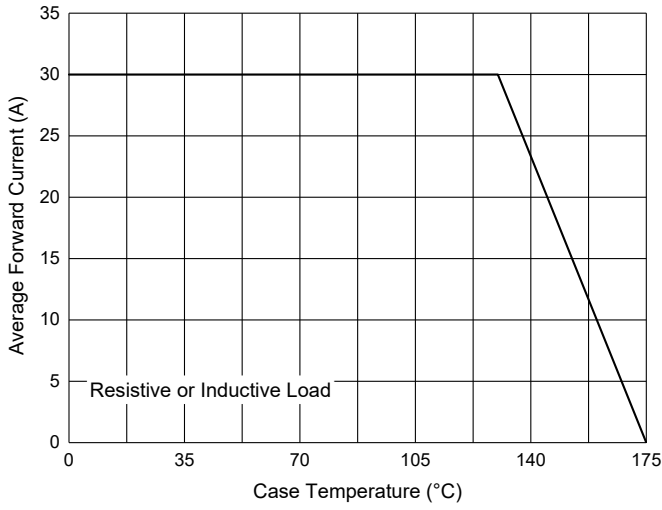


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

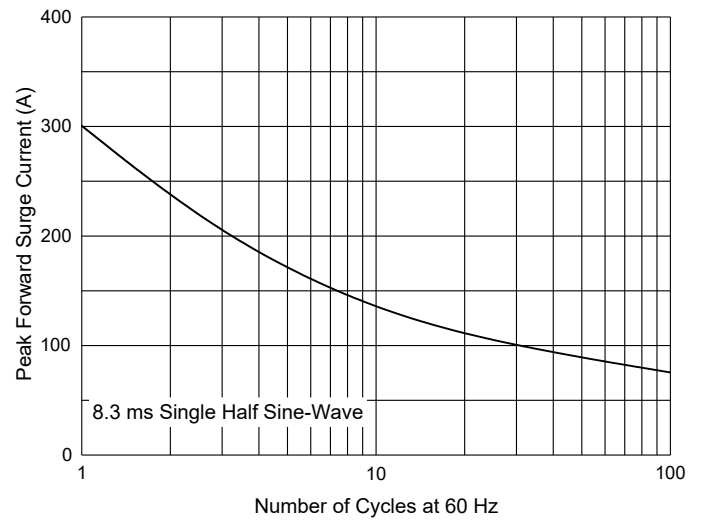


Fig. 3 - Typical Instantaneous Forward Characteristics

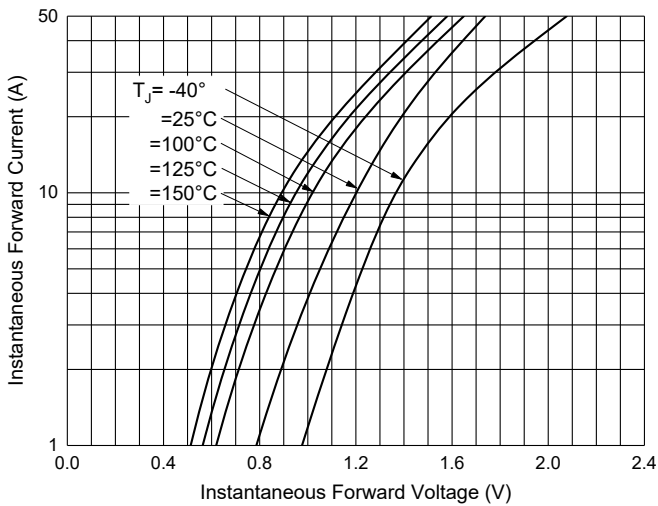


Fig. 4 - Typical Reverse Leakage Characteristics

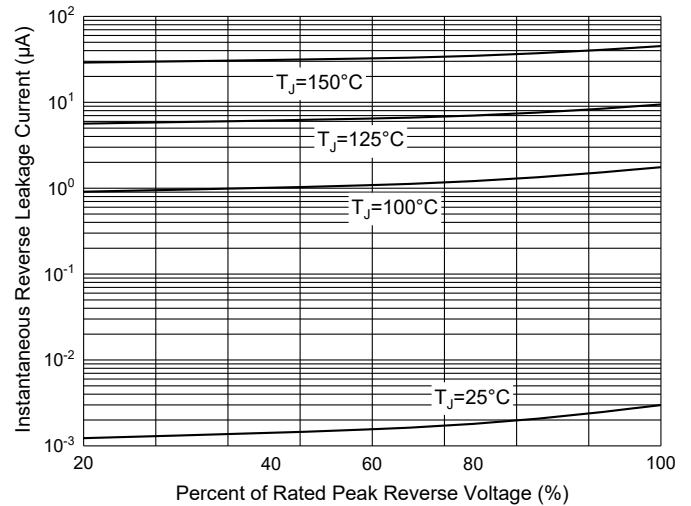


Fig. 5 - Typical Capacitance Characteristics

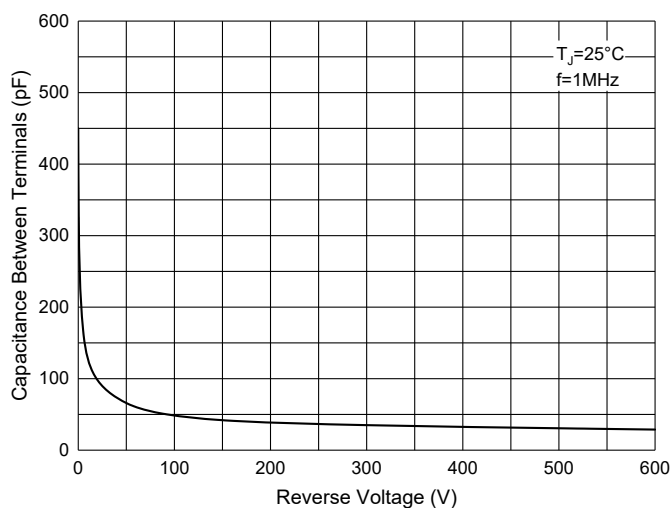
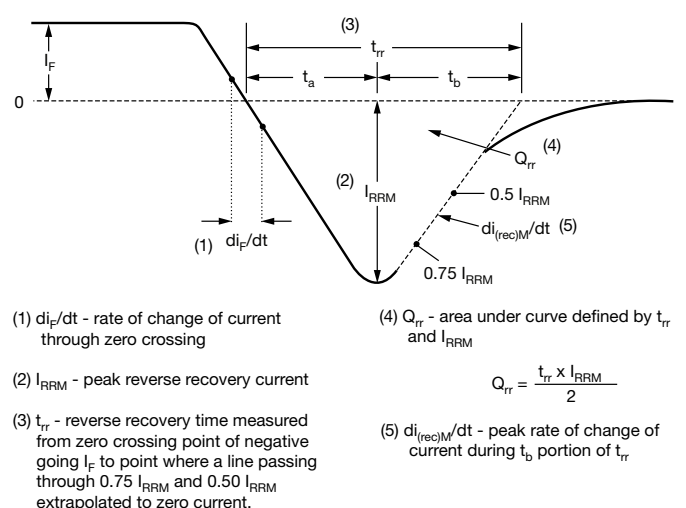


Fig. 6 - Reverse Recovery Waveform and Definitions



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 800pcs/Reel
Part Number-BP	Tube: 5Kpcs/Ctn

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